



PORTAL TO THE WORLD OF FAILURE ANALYSIS

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INTRODUCTION

It is no revelation that failure analysis today is drastically different from failure analysis 25 years ago. Not surprisingly, there is general agreement that failure analysis is tougher today. Problems presented by multi-die packaging, multilayer metallization, and mind-numbing complexity were not imagined. No one is complaining. Everyone is just plowing ahead undaunted, tackling each barrier as it arises. In a way, that attitude is one thing that has not changed. We always have attacked problems from all directions. We developed new imaging, measurement, and testing techniques as required. One major difference between then and now is *EDFA* magazine. Then, there was no *EDFA* magazine. How much difference does that make?

EDFA MAGAZINE

EDFA, more than any other magazine, introduces state-of-the-art research and new failure analysis techniques. It expands the horizons of analysts beyond their specific jobs to the limitless variation of failure analysis around the world. Many analysts read *EDFA* magazine as soon as it arrives. They read to better understand mechanisms and physics that might explain a perplexing failure. And, there is always hope that a case history will provide key insight for a current problem.

I am honored to be one of the nineteen people involved in producing and editing content for *EDFA* magazine. *EDFA* is intended to be authoritative, clear, and up to date. Without exception, I am pleased with the result that shows up in my mail box. State-of-the-art features are well written and successfully edited to present information logically and understandably. Case histories are summed up meaningfully, with clear and documented analysis steps. *EDFA* is a valuable resource for analysts.

EDFA also provides a way for analysts to share tricks for overcoming analysis barriers and tips for exploiting or extending the powers of failure analysis equipment. Analysts struggle with difficult tasks every day. Smart,

“EDFA IS NOT JUST A RESOURCE FOR FAILURE ANALYSTS. MORE ACCURATELY, EDFA IS A PORTAL BETWEEN EACH ANALYST AND THE WORLD OF FAILURE ANALYSIS.”



clever innovations sometimes make awkward tasks easy. The “Master FA Technique” column is an *EDFA* feature that allows analysts to share such ideas in a short, concise note. *EDFA* is a tool that analysts can use to share best practices.

More than that, *EDFA* is a place to find references to failure analysis publications and failure analysis laboratories. All of this is good, but there is a danger.

The danger is that analysts underestimate their own work. Analysts, potential authors for *EDFA*, may dismiss the idea of writing because their own work is so familiar to them. Analysts are just doing their jobs today in the same way that they have for a long time. Many may assume they have nothing to write about. When this happens, we all lose. Potential authors lose because they don’t receive the benefits of being an *EDFA* author. (Authors do enjoy benefits to their careers.) The rest of us lose because a rich source of good ideas is blocked from us.

The irony is that, in fact, good ideas are everywhere. All failure analysts are faced with unique problems every day, and every day unique, clever solutions are found.

EDFA is not just a resource for failure analysts. More accurately, *EDFA* is a portal between each analyst and the world of failure analysis. *EDFA* cannot meet its full potential until it is widely seen as a tool for analysts to communicate. Like analytical tools and microscopes, *EDFA* is a tool we can learn to use better.

Involvement of the whole analysis community is necessary to make *EDFA* great. Failure analysis problems are



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more difficult than ever. *EDFA* magazine is a great source of ideas and techniques, but that is just a start. Use and build on ideas you find, and, when you can, use *EDFA* to share innovative ideas that you develop. Call or e-mail *EDFA*'s Editor or any of the Associate Editors to discuss your idea. You will find someone eager to listen and ready to provide honest feedback. There is nothing to lose.

ABOUT THE AUTHOR

David Burgess is a failure analyst and reliability engineer. He developed techniques and taught in those areas at Fairchild Semiconductor and Hewlett-Packard. He is



the founder of Accelerated Analysis, a manufacturer and distributor of specialty failure analysis tools. David is the co-author of *Wafer Failure Analysis for Yield Enhancement*. A graduate of Rensselaer Polytechnic Institute and San Jose State University, he is a member of EDFAS and has served on various ISTFA committees. David is a Senior Life Member of IEEE and was General Chairman of the 1983 International Reliability Physics Symposium (IRPS).

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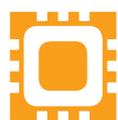
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